

## REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

By the above amendments, claims 21, 23, 26-30 and 32-34 have been amended by replacing the term "polysaccharide" with "dextrin." Support for such amendments can be found at pages 71-77 of the instant specification. Claim 23 has been amended for clarification purposes. Support for such amendment can be found in the specification at least at page 13, lines 19-23.

In the Official Action, claims 21, 23-29, and 31-34 stand rejected under 35 U.S.C. §102(b) as being anticipated by International Publication No. WO 97/07833 (*Pressato et al*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Independent claim 21 recites a method for preventing biological adhesion comprising the steps of: providing an adhesion preventive material comprising a crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group, wherein the active ester group of the crosslinking dextrin derivative is capable of reacting with the hydroxyl group of its own molecular chain or with a hydroxyl group of a second molecular chain, wherein the adhesion preventive material does not contain a crosslinking agent, forming an ester polymerization material crosslinked due to covalent binding of the active ester group of the crosslinking dextrin derivative and the hydroxyl group of its own molecular chain or the hydroxyl group of the second molecular chain, when the

adhesion preventive material is under an alkaline condition, wherein the method is effective to prevent biological adhesion in the biological site.

*Pressato et al* relates to biomaterials for preventing post-surgical adhesions comprised of hyaluronic acid derivatives. See title. *Pressato et al* discloses that the biomaterials are essentially constituted by esterified derivatives of hyaluronic acid or by cross-linked derivatives of hyaluronic acid. See page 1, lines 5-10.

It is well established that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). For an anticipation to exist, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

In the present case, *Pressato et al* does not disclose each feature recited in independent claim 21, and as such fails to constitute an anticipation of such claim. As noted above, claim 21 has been amended to recite that an adhesion preventive material is provided which comprises a crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group, wherein the active ester group of the crosslinking dextrin derivative is capable of reacting with the hydroxyl group of its own molecular chain or with a hydroxyl group of a second molecular chain, as recited in claim 21. *Pressato et al* does not disclose such crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group, as now recited in claim 21. By comparison, *Pressato et al* is concerned with the use of derivatives of hyaluronic acid. See, for example, page 1, lines 5-10 and page 5, lines 20-26.

Quite clearly, such derivatives are not the same as the claimed crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group.

For at least the above reasons, independent claim 21 is not anticipated by *Pressato et al.* Accordingly, withdrawal of the above rejection is respectfully requested.

Claim 30 stands rejected under 35 U.S.C. §103(a) as being obvious over *Pressato et al.*, and further in view of U.S. Patent No. 5,676,964 (*Della Valle et al.*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

*Pressato et al.* does not disclose or suggest the crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group, as now recited in claim 21. As discussed above, the *Pressato et al.* disclosure is concerned with the use of hyaluronic acid derivatives in biomaterials. See, for example, page 1, lines 5-10 and page 5, lines 20-26. In view of the fact that the use of a hyaluronic acid derivative is an essential aspect of the *Pressato et al.* biomaterials, it would not have been obvious to the ordinarily skilled artisan to substitute such hyaluronic acid derivative with the claimed crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group. The hyaluronic acid derivative is a critical component of the *Pressato et al.* biomaterials, and the ordinarily skilled artisan would not have been led to substitute same with the claimed crosslinking dextrin derivative.

*Della Valle et al.* fails to cure the above-described deficiencies of *Pressato et al.* In this regard, the Patent Office has relied on *Della Valle et al.* for disclosing the

use of carboxymethyl cellulose, starch or chitin in a self crosslinking gel. See Official Action at page 4. However, even if *Della Valle et al* would have been combined with *Pressato et al* in the manner suggested by the Patent Office, the resulting combination nevertheless fails to disclose or suggest a crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group, as recited in claim 21.

Applicants respectfully submit that the use of a crosslinking dextrin derivative containing at least one active ester group introduced in a dextrin chain, and at least one hydroxyl group, as an adhesion preventive material in the manner presently claimed, would not have been obvious to the ordinarily skilled artisan. In this regard, Applicants have surprisingly and unexpectedly discovered the excellent adhesion preventive material performance of a crosslinking dextrin derivative, for example, as can be seen from Example 1 discussed at pages 75-77 of the instant specification. Neither of the applied documents provides any recognition or suggestion of the excellent adhesion preventive material performance attainable by a crosslinking dextrin derivative.

For at least the above reasons, independent claim 21 is non-obvious over the applied documents. Accordingly, withdrawal of the above §103(a) rejection is respectfully requested.

The dependent claims are allowable at least by virtue of their direct or indirect dependence from independent claim 1. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.


From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

If there are any questions concerning this paper or the application in general,  
the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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